

Notice of Allowability

Application No.

09/997,859

Examiner

Javid A. Amini

Applicant(s)

MAKINEN, BRUCE ALLAN

Art Unit

2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the interview dated 10/14/2005.
2. ☒ The allowed claim(s) is/are 6,8-13,19,21-28,30-35 and 38-42.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

Claims status:

Claims 1-4, 7, 14-18, 20, 29, 36 and 37 canceled.

Claims 6, 16, 25, 27, 28, 34 and 41 amended.

Claims 6, 8-13, 19, 21-28, 30-35 and 38-42 allowed.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Chris Guinn on 10/14/2004.

The application has been amended as follows:

Amended claims:

Claim 6. A method for manipulating a graphical display of a printed circuit board model, the printed circuit board model adapted to be used in an automated x-ray inspection system for detecting defects in a manufactured printed circuit board having one or more components comprising one or more pins soldered to the printed circuit board, the method comprising the steps of:

providing a graphical user interface comprising a first portion for providing a graphical display of a printed circuit board model comprising a plurality of image objects associated with a printed circuit board;

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receiving a user selection of a first image object in the first portion of the graphical user interface;

displaying a target area containing the first image object selected, the target area corresponding to a portion of the printed circuit board to be imaged by the automated x-ray imaging inspection system;

receiving a user selection of a second image object in the first portion of the graphical user interface; and

modifying the displayed target area such that the target area is automatically manipulated to contain the first and second image objects by centering the target area with respect to the first and second selected image objects.

Claim 19. A computer program embodied in a computer-readable medium for manipulating a graphical display of a printed circuit board model, the printed circuit board model adapted to be used in an automated x-ray inspection system for detecting defects in a manufactured printed circuit board having one or more components comprising one or more pins soldered to the printed circuit board, the computer program comprising logic configured to:

provide a graphical user interface comprising a first portion for providing a graphical display of a printed circuit board model comprising a plurality of image objects associated with a printed circuit board;

receive a user selection of a first image object in the first portion of the graphical user interface;

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display a target area containing the first image object selected, the target area corresponding to a portion of the printed circuit board to be imaged by the automated x-ray imaging inspection system;

receive a user selection of a second image object in the first portion of the graphical user interface; and

modify the displayed target area such that the target area is automatically manipulated to contain the first and second image objects area by centering the target area with respect to the first and second selected image objects.

Claim 25. The computer program of claim 19 20, wherein the target area comprises a square.

Claim 27. A system for manipulating a graphical display of a printed circuit board model, the printed circuit board model adapted to be used in an automated x-ray inspection system for detecting defects in a manufactured printed circuit board having one or more components comprising one or more pins soldered to the printed circuit board, the system comprising:

means for providing a graphical user interface comprising a first portion for providing a graphical display of a printed circuit board model comprising a plurality of image objects associated with a printed circuit board;

means for receiving a user selection of one or more of the image objects in the first portion of the graphical user interface; and

means for displaying a target area such that the target area is automatically manipulated to contain one or more selected image objects and a maximum number of the image objects not selected are contained in the target area; and

means for modifying the target area by centering the target area with respect to the first and second selected image objects;

wherein the target area corresponds to a portion of the printed circuit board to be imaged by the automated x-ray imaging inspection system.

Claim 28. A system for manipulating a graphical display of a printed circuit board model, the printed circuit board model adapted to be used in an automated x-ray inspection system for detecting defects in a manufactured printed circuit board having one or more components comprising one or more pins soldered to the printed circuit board, the system comprising:

logic configured to:

provide a graphical user interface comprising a first portion for providing a graphical display of a printed circuit board model comprising a plurality of image objects associated with a printed circuit board;

receive a user selection of a first image object in the first portion of the graphical user interface;

display a target area containing the first image object selected, the target area corresponding to a portion of the printed circuit board to be imaged by the automated x-ray imaging inspection system;

receive a user selection of a second image object in the first portion of the graphical user interface; and

modify the displayed target area such that the target area is automatically manipulated to contain the first and second image objects by centering the target area with respect to the first and second selected image objects;

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a processing device configured to implement the logic; and

a display device configured to support the graphical user interface.

Claim 34. The system of claim 28 29, wherein the target area comprises a square.

Claim 41. The system of claim 27 36, wherein the target area comprises a square.

Claims numbering:

Old claims numbering	New claims numbering	Claims type
1	Canceled	
2	Canceled	
3	Canceled	
4	Canceled	
5	Canceled	
6	1	Independent
7	Canceled	Dependent
8	2	Dependent
9	3	Dependent
10	4	Dependent
11	5	Dependent
12	6	Dependent
13	7	Dependent
14	Canceled	
15	Canceled	
16	Canceled	

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17	Canceled	
18	Canceled	
19	8	Independent
20	Canceled	
21	9	Dependent
22	10	Dependent
23	11	Dependent
24	12	Dependent
25	13	Dependent
26	14	Dependent
27	15	Independent
28	21	
29	Canceled	
30	22	Dependent
31	23	Dependent
32	24	Dependent
33	25	Dependent
34	26	Dependent
35	27	Dependent
36	Canceled	
37	Canceled	

38	16	Dependent
39	17	Dependent
40	18	Dependent
41	19	Dependent
42	20	Dependent

An examiner's statement of reasons for allowance

The following is an examiner's statement of reasons for allowance:

A user selects first and second image objects within displaying a target area, and automatically centering the first and second image objects of the target area for checking by an automated x-ray inspection system, meaning just the selected image objects is inspected by the x-ray system.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javid A. Amini whose telephone number is 571-272-7654. The examiner can normally be reached on 8-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 571-272-7664. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


JEFFERY B. BIER
PRIMARY EXAMINER

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Art Unit 2672

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